

ABSTRACT OF THE DISCLOSURE

A substrate processing apparatus for drying a substrate is provided with a chamber, quartz tank, nitrogen supply part, blowing mechanism, hot water unit and substrate holding mechanism. A substrate after being subjected to cleaning with pure water is placed in the quartz tank in the chamber. This substrate is heated by immersing it into hot water supplied from the hot water unit (degassed and heated pure water), and then lifted in the atmosphere of the chamber by the substrate holding mechanism. The atmosphere of the chamber is brought into a low oxygen state by using of nitrogen gas supplied from the nitrogen supply part and blowing mechanism. Thereby, the pure water attached to the substrate evaporates by the accumulated heat of the substrate in the low oxygen atmosphere. This permits to provide a substrate processing apparatus and a substrate processing method with which it is possible to dry a substrate while suppressing the occurrence of water marks.